

IN THE CLAIMS:

Claims 5, 10-12, 23, 26 and 27 were previously cancelled. Claims 1, 7, 8, 21, 22, 32, and 36 through 40 have been amended herein. All of the pending claims are presented below. This listing of claims will replace all prior versions and listings of claims in the application. Please enter these claims as amended.

Listing of Claims:

1. (Currently amended) A method of disposing a conductive structure on at least one contact pad on an active surface of a semiconductor device substrate, comprising:
disposing a layer comprising polymeric material over the substrate;
imparting said layer with a thickness substantially equal to a desired height of the conductive structure;
forming at least one aperture through said layer to expose at least a portion of the at least one contact pad;
disposing a quantity of conductive material on said layer and permitting said conductive material to substantially fill said at least one aperture;
bonding said conductive material within said at least one aperture to the at least one contact pad to form the conductive structure of substantially said desired height; and
partially exposing a lateral periphery of the conductive structure through said layer.

2. (Previously presented) The method of claim 1, wherein said disposing said quantity of conductive material on said layer comprises disposing a quantity of substantially molten conductive material on said layer.

3. (Original) The method of claim 2, wherein said bonding is effected as said quantity of substantially molten conductive material solidifies in said at least one aperture.

4. (Original) The method of claim 1, wherein said disposing said layer comprises adhering a film to a surface of the substrate.

5. (Cancelled)

6. (Previously presented) The method of claim 1, wherein said disposing said layer comprises placing a quantity of polymeric material on the substrate and wherein said imparting comprises spreading said polymeric material to a substantially consistent thickness over at least a portion of a surface of the substrate.

7. (Currently amended) The method of claim 1, wherein said forming said at least one aperture occurs prior to said disposing said layer over the substrate.

8. (Currently amended) The method of claim 1, wherein said forming said at least one aperture comprises etching said at least one aperture through said layer.

9. (Original) The method of claim 8, wherein said etching occurs following said disposing said layer over the substrate.

10.-12. (Cancelled)

13. (Previously presented) The method of claim 1, wherein said partially exposing said lateral periphery of the conductive structure comprises reducing said thickness of said layer.

14. (Previously presented) The method of claim 13, wherein said reducing said thickness comprises partially etching said layer.

15. (Original) The method of claim 13, wherein said reducing said thickness comprises shrinking said layer.
16. (Previously presented) The method of claim 15, wherein said shrinking comprises exposing said layer to radiation, exposing said layer to a shrinking agent, or exposing said layer to a plasma.
17. (Previously presented) The method of claim 1, wherein said partially exposing said lateral periphery comprises exposing said layer to a solvent.
18. (Original) The method of claim 1, wherein said disposing said quantity of conductive material comprises immersing a surface of the substrate having said layer disposed thereon within a quantity of molten conductive material.
19. (Original) The method of claim 1, wherein said disposing said quantity of conductive material comprises disposing solder on said layer.
20. (Original) The method of claim 1, wherein said disposing said quantity of conductive material comprises disposing conductive elastomer on said layer.
21. (Currently amended) The method of claim 1, wherein said forming said at least one aperture comprises exposing a portion of said at least one contact pad located within a periphery thereof.

22. (Currently amended) A method of forming a solder mask, comprising:
disposing a solder mask material comprising a polymer onto an active surface of a substrate;
forming a layer of said solder mask material having a substantially consistent thickness on the
active surface of said substrate, said thickness of said layer being substantially equal to a
desired conductive structure height; and
forming at least one aperture through said layer in a location corresponding to a location of at
least one contact pad of said substrate to expose said at least one contact pad through said
solder mask material, said solder mask material facilitating a partial reduction in said
thickness when ~~the~~ a conductive structure has been at least partially formed in said at
least one aperture.

23. (Cancelled)

24. (Previously presented) The method of claim 22, wherein said disposing and said
forming said layer are effected substantially simultaneously.

25. (Previously presented) The method of claim 22, wherein said forming said layer
comprises planarizing said layer.

26. (Cancelled)

27. (Cancelled)

28. (Previously presented) The method of claim 22, wherein said forming said layer
comprises softening or melting said solder mask material.

29. (Previously presented) The method of claim 28, wherein said forming said layer
comprises spinning said solder mask material over said active surface.

30. (Previously presented) The method of claim 28, wherein said forming said layer comprises spreading said solder mask material across said active surface.

31. (Previously presented) The method of claim 22, wherein said forming said at least one aperture comprises etching a region of said layer.

32. (Currently amended) The method of claim 22, wherein said ~~at least one~~ solder mask material comprises a photosensitive polymeric material and wherein said forming said at least one aperture comprises exposing a region of said photosensitive polymeric material disposed over said at least one contact pad to form said at least one aperture through said layer.

33. (Previously presented) A method of exposing at least a portion of a lateral periphery of a conductive structure on a semiconductor device, comprising partially reducing a thickness of a solder mask that comprises polymeric material disposed around said lateral periphery.

34. (Original) The method of claim 33, wherein said reducing said thickness comprises irradiating said solder mask, exposing said solder mask to a plasma, or exposing said solder mask to a shrinking agent.

35. (Original) The method of claim 33, wherein said reducing said thickness comprises selectively etching a material of said solder mask with respect to the conductive structure.

36. (Currently amended) A method of exposing a conductive structure that protrudes from a surface of a semiconductor device through a solder mask that comprises a polymeric material positioned on the surface of the semiconductor device, comprising:
partially reducing a thickness of at least portions of the solder mask laterally surrounding the
~~conductive structures.~~ structure.

37. (Currently amended) The method of claim 36, wherein said partially reducing comprises reducing a thickness of substantially all of the solder mask.

38. (Currently amended) The method of claim 36, wherein said partially reducing comprises exposing the solder mask to at least one of radiation, a plasma, and a shrinking agent.

39. (Currently amended) The method of claim 36, wherein said partially reducing comprises removing a material of the solder mask with selectivity over a material of the
~~conductive structures.~~ structure.

40. (Currently amended) The method of claim 39, wherein said removing comprises etching the material of the solder mask with selectivity over the material of the conductive
~~structures.~~ structure.